

In the Specification

Please replace the first paragraph on page 2 of the English translation of WO 04/054753 A1 with the following paragraph:

Furthermore, machine tools are known that additionally comprise a pallet changing module which, in relation to the clamping module, is symmetrically attached thereto and which is used to move the workpieces onto the clamping module and remove them therefrom. The pallet changing module is structured for example to include two workpiece receiving zones, thus causing a first workpiece that is attached to the pallet changing module to be clamped straight by the clamping module and to undergo machining by means of the spindle module, i.e. the machining module, while in the second workpiece zone of the pallet changing module, a second workpiece can be removed in a straight position from the pallet changing module and a new workpiece can be placed thereon, it being possible to pivot this new workpiece onto the clamping module as a result of, for example, a rotational movement into the machining and clamping position after the first workpiece has finished being machined. In consequence, the retooling times can be kept to a minimum, because it is not necessary to perform the complete retooling operation while the machining module is at a standstill; instead it is possible to perform the actual removal and loading of the workpiece regardless of whether the workpiece has finished being machined or has started to be machined. One example of such a layout is depicted in EP 0 908 269 A2; in this example, machining is, moreover, effected by means of two spindles which face one another and which have parallel axes. The axial direction is perpendicular to the rotary axis of the pallet changing device and perpendicular to the connection between the machining and clamping positions.

Please insert the following new paragraph after the first paragraph on page 2 of the English translation of WO 04/054753 A1:

JP 2003-340673 A (Patent Abstracts of Japan) depicts a rotatable pallet changing device that is positioned with its rotary axis centrically on a bed. The device can rotate pallets from a clamping position into a machining position. In the machining position, the pallets are located centrically over the axis or centre line of a machining table of a machine tool that is fixed to the bed. The rotary axis is not aligned with the centre line.

Please replace the first paragraph on page 3 of the English translation of WO 04/054753 A1 with the following paragraphs:

The invention is based on the idea of retaining a horizontally oriented or aligned spindle axis, because, in the case of a horizontally oriented spindle, the swarf that is obtained during dry machining can fall unhindered down into the machine tool's waste-disposal channel. To nevertheless provide a high degree of flexibility regarding the positioning of the machining module, along with its horizontally oriented spindles or spindle~~spindle(s)~~, onto the clamping module which is fixedly connected to a pallet changing module, the pallet changing module is aligned asymmetrically relative to a mid-plane that indicates the middle of the clamping module and machining module and which extends essentially parallel to the direction of the spindle axis. This makes it possible to realize not only a so-called single-spindle version, i.e. a machine tool that comprises a machining module with a horizontally oriented spindle, but also configurations designed as so-called dual-spindle versions, i.e. layouts in which two machining modules are provided, these modules being positioned at an angle of 90° in relation to one another, in other words the spindle axes extend at an angle of 90° relative to each other, without entailing any modifications to the clamping module/pallet changing module combination.

This is preferably brought about in that the pallet changing module does not project over two of the vertically oriented faces of the essentially cuboid clamping module. The machining ~~module~~ or a machining module-modules can be coupled to these faces above which the pallet changing module does not protrude.

Please replace the fourth paragraph on page 7 of the English translation of WO 04/054753 A1 with the following paragraph:

Fig. 1 shows a top view of a ~~first embodiment of the machine tool according to the~~ that serves to explain the present invention;

Please replace the sixth paragraph on page 7 of the English translation of WO 04/054753 A1 with the following paragraph:

Fig. 3 shows a ~~second~~ first embodiment of the machine tool as defined by the invention; and

Please replace the seventh paragraph on page 7 of the English translation of WO 04/054753 A1 with the following paragraph:

Fig. 4 ~~shows a third embodiment of the~~ represents a further machine tool ~~according to the~~ which serves to explain the present invention.

Please replace the first paragraph on page 8 of the English translation of WO 04/054753 A1 with the following paragraph:

Fig. 1 depicts a top view of a machine tool 10 ~~in accordance with the invention, this machine tool being which is~~ ideal for machining metallic workpieces, especially workpieces made of light metal. The machine tool 10 comprises a machining module 12 on which a spindle 14 is supported such that the spindle axis extends horizontally. This can be readily identified in the side view depicted in Fig. 2. The spindle 14 is in turn supported on a pivoting arm 16 such that the spindle can move horizontally in a straight line on the pivoting arm 16, i.e. in a horizontal direction parallel to the spindle axis. The pivoting arm 16, for its part, is rotatably supported on a bracket 18, with the pivoting movement extending on a plane perpendicular to the spindle axis. The bracket 18 is in turn supported on the machining module in a vertically slidable fashion. Linear drive mechanisms 20, for example, are provided for this purpose.

Please replace the third paragraph on page 8 of the English translation of WO 04/054753 A1 with the following paragraph:

In the ~~embodiment~~ machine tool illustrated in Figs. 1 and 2, the machining module 12 has one spindle respectively, with the spindle being nevertheless depicted in various positions.

Please replace the fourth paragraph on page 9 of the English translation of WO 04/054753 A1 with the following paragraph:

The clamping module 28 is in turn designed as a turntable, the rotary axis of which runs parallel to the rotary axis of the clamping module's turntable, i.e. it extends vertically. In the ~~embodiment~~ machine tool depicted in Figs. 1 and 2, the rotary axis intersects an imaginary line that extends from the centre of the essentially cuboid clamping table 24 as far as one of its corners, namely

the corner in the bottom right of Fig. 1. The asymmetry of the manner in which the turntable 28 as a pallet changing module is attached is chosen in such a way that the pallet changing module protrudes over two of the vertically extending end faces of the essentially cuboid clamping module 24, namely the lower end face in Fig. 1 and the right-hand end face in Fig. 1. This permits ready access to the machining chamber from the third end face, which is not hindered by the protruding turntable.

Please replace the first full paragraph on page 10 of the English translation of WO 04/054753 A1 with the following paragraph:

Fig. 3 depicts ~~a further~~ an embodiment of the machine tool 10 as defined by the invention. The set-up is essentially the same as that shown in Fig. 1, with the difference being that a second machining module 12' is attached to the free end face of the cuboid clamping module 24, above which end face the pallet changing module 28 in the first embodiment illustrated in Fig. 1 does not protrude. The spindles 14 of the first machining module 12 and the spindle 14' of the second machining module 12' are each positioned horizontally and at an angle of 90° relative to one another. In the embodiment shown in Fig. 3, the machining modules 12 and 12' are identical in design. It is, however, also conceivable to use two different machining modules 12 and 12', for example a triaxial machining module and a biaxial machining module, or two triaxial modules which nevertheless differ in their set-up.

Please replace the first full paragraph on page 11 of the English translation of WO 04/054753 A1 with the following paragraph:

A further ~~embodiment of the present invention~~ machine tool is shown in Fig. 4. This ~~embodiment~~ machine tool includes two symmetrically positioned units which are each composed of a machining module, a clamping module and a pallet changing module. The machine tool 10 shown in Fig. 4 is designed as a so-called synchronous machine tool, i.e. two workpieces can be machined, independently of one another, by a spindle 14 or 14' respectively, for example by using different machining programs too. The set-up operations on the pallet changing module 28 or 28' can be executed independently of one another, with the result that, overall, it is possible to machine two workpieces simultaneously within a confined space, yet the machine tool 10 depicted in Fig. 4 remains compact. The mutually corresponding modules 12, 12'; 24, 24' and 28, 28' are each positioned symmetrically relative to one another with respect to a plane of symmetry

which separates the first machining module 12 and the first clamping module 24 from the second machining module 12' and the second clamping module 24'. This layout, while retaining ever ready access to the pallet changing module 28 or 28', is brought about in that the pallet changing module 28 is ~~in each case~~ positioned off-centre in each case, i.e. asymmetrically, relative to the respective clamping module 24 and machining module 12 or 24', 12'.